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17 June 1960

MEMORANDUM FOR: Chairman, Guided Missile and Astronautics
Intelligence Committee

SUBJECT: Draft Contribution for SNIE 100-6-60

Transmitted herewith is the CIA contribution to SNIE 100-
6-60, in accordance with your memorandum of 14 June 1960.



CIA Member

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DRAFT CONTRIBUTION TO SNIE 100-6-60

There is no direct evidence of Soviet development of or intention to develop missiles for use against US reconnaissance satellites.

Soviet capabilities are considered in several problem areas:

1. Vehicle - The USSR has several vehicles which could be utilized depending on the technical course of action selected. The operational 700 or 1100 n.m. ballistic missiles and the ICBM could be modified, substituting a final powered homing stage for the nosecone. The ICBM as a booster would ease the interception inasmuch as a closer approximation to the reconnaissance satellite velocity could be achieved. The 700 and 1100 n.m. missiles as boosters would provide substantially lower speeds at interception, requiring a proportional navigation homing and smaller warhead capability. For effective denial of flight over Soviet territory, of course, large numbers of missiles would have to be deployed to enable intercept during the first or very early pass.

2. Warhead - Use of a nuclear warhead would simplify greatly the homing and kill phase of the trajectory. The USSR has suitable nuclear warheads available for this application. However, the USSR may be unwilling to violate the nuclear test ban, if it still exists at that time. A high explosive warhead would, of course, require a much closer approach for detonation.

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3. Homing - There is some evidence that radar and infrared missile homing heads for anti aircraft use have been under development in the USSR. Refinement for anti satellite application would be possible.

Incorporation of counter-countermeasures in the reconnaissance satellite would make interception or neutralization even more difficult.

Despite the lack of direct substantiating evidence, we believe the USSR could develop an anti reconnaissance satellite missile and that it could be available for operational use sometime in the next several years. The effectiveness of the system will be seriously limited by inability to initially detect, identify, and track, and by the necessity to deploy large numbers of expensive missile systems to enable attempt at interception on a quick reaction basis. We believe the USSR will be unable to prevent acquisition of data by US reconnaissance satellites, except for an occasional basis, during the foreseeable future.

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